

Date: Tue, 27 Apr 93 12:34:37 PDT
From: Info-Hams Mailing List and Newsgroup <info-hams@ucsd.edu>
Errors-To: Info-Hams-Errors@UCSD.Edu
Reply-To: Info-Hams@UCSD.Edu
Precedence: Bulk
Subject: Info-Hams Digest V93 #504
To: Info-Hams

Info-Hams Digest Tue, 27 Apr 93 Volume 93 : Issue 504

Today's Topics:

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 AM Moulation Question (2 msgs)
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 Paddle key question
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Reciprical license in ENGLAND
 Repeater freq.s - VA/NC/SC
 TOUCH LAMP INTERFERENCE
 What offsets are used for vh

Send Replies or notes for publication to: <Info-Hams@UCSD.Edu>
Send subscription requests to: <Info-Hams-REQUEST@UCSD.Edu>
Problems you can't solve otherwise to brian@ucsd.edu.

Archives of past issues of the Info-Hams Digest are available
(by FTP only) from UCSD.Edu in directory "mailarchives/info-hams".

We trust that readers are intelligent enough to realize that all text
herein consists of personal comments and does not represent the official
policies or positions of any party. Your mileage may vary. So there.

Date: 27 Apr 93 18:13:54 GMT
From: news-mail-gateway@ucsd.edu
Subject: Address help
To: info-hams@ucsd.edu

Does anyone have a recent callbook or database with N1NLK listed? I need his
address but he's not in MARVIN. ~~~~~

Thanks.

steve - W3GRG
mosier@iris.uncg.edu dit dit

Date: Mon, 26 Apr 93 10:40:45 edt
From: pa.dec.com!radio.nl.nuwc.navy.mil!keith@decwrl.dec.com
Subject: AM Modulation Question
To: info-hams@ucsd.edu

In article <103360169@hpfcso.FC.HP.COM> Bob Myers writes:
>The primary disadvantage is the need for a high-powered audio amplifier and
>a hefty modulation transformer. Given the popularity of SSB for amateur
>and utility operation, this form of modulation (usually called "plate
>modulation") is limited to AM broadcasters, both MW and SW.

Well, I don't know if I'd go THAT far... ;^) There is still quite a bit of
AM operation on the ham bands, and lots of it is high level plate modulation.
I wouldn't say it's "limited to AM broadcasters."

As to the hefty modulation transformer, that's becoming obsolete with the
advent of PDM, the Harris "digital modulation" technique, and other modern
methods of AM. And there are hams using these methods (at least PDM).
I have a Heathkit Apache (remember those?) from which I threw out the
modulation transformer about 5 years ago. It's still being plate modulated.
Unfortunately, the rest of the transmitter still weighs about 95 pounds
too much. :^)

Maybe someone else can answer this question... do they still make AM
broadcast transmitters with conventional modulators, or has everyone gone
to more efficient methods?

Regards,
Keith (WA2Q)

keith@radio.nl.nuwc.navy.mil

Date: 26 Apr 93 21:45:07 GMT
From: ogicse!uwm.edu!cs.utexas.edu!sdd.hp.com!hpscit.sc.hp.com!
rkarlqu@network.UCSD.EDU
Subject: AM Moulation Question
To: info-hams@ucsd.edu

Alan Bloom (alanb@sr.hp.com) wrote:
: Mr S Browne (esrlb@csv.warwick.ac.uk) wrote:
: : In article <1rh42k\$c8l@hpscit.sc.hp.com> rkarlqu@scd.hp.com (Richard

Karlquist) writes:

```
: : >
: : >Actually, plate modulation has been obsolete for at least 25 years.
: : >What is done in modern broadcast transmitters is to build a matched
: : >pair of transmitters, each of which puts out half the total power.
: : >The audio is applied to them as *phase-modulation*. The two transmitters
: : >are summed together at the outputs in a high-power combiner hybrid
: : >which feeds the antenna. ...
:
: : AM signal,  $S(t) = E(t) \cos(\omega t)$  ,  $\omega t$  being radian carrier freq.
:
: : This vector can also be generated by
:
: :  $S(t) = E_m/2[\sin(\omega t + \phi) - \sin(\omega t - \phi)]$ 
:
: : where  $E_m$  is the maximum value of  $E(t)$ , and  $\phi$  is the angle necessary to
: : satisfy the equality.
:
: : One disadvantage of this technique is that you lose quite a bit of power
: : in the hybrid combiner. At modulation peaks, the two signals are in
: : phase, and power output is the sum of the powers of the two power amplifiers.
: : With no modulation, the two partially out-of-phase signals combine to create
: : a carrier of half the amplitude (1/4 the power), a 6 dB loss.
:
: : AL N1AL
```

That would be true if they used a sum-and-difference hybrid as you seem to have assumed, but I don't believe the combiner is built that way. What actually happens is that the load impedance seen by the two transmitters varies with modulation so the amount of current drawn (hence power) is less with no modulation, so from the standpoint of power consumption, it is not as bad as you say. I probably shouldn't have used the word "hybrid" in describing the combiner.

BTW, with plate modulation, you need an audio amplifier with output power of 1/2 the RF carrier power (25kW audio for a 50kW AM broadcaster). This amplifier will run about 33% efficiency for program material (the 78.5% class B efficiency in handbooks is only for sine waves) and hence dissipate 8kW or so except during silent periods.

Rick N6RK
rkarlqu@scd.hp.com

Date: 26 Apr 93 21:28:11 GMT
From: RICEVM1.RICE.EDU!LINSCOT@rice.edu
Subject: AM Moulation Question

To: info-hams@ucsd.edu

In article <1993Apr21.224157.3916@csdvax.csd.unsw.edu.au>
u1066579@csdvax.csd.unsw.edu.au writes:

>

>Hi,

> I have a quick question about AM modulation systems. I wondered why most
>broadcast transmitters modulate the final RF stage? Are there any
>disadvantages to modulating stages prior to the final RF stage.

>Best Wishes,

>Henry.

>Email u1066579@csdvax.csd.unsw.edu.au

>

A few years ago, one of our local 50 KW AM stations replaced their old RCA transmitter with a modern unit from Harris. It uses pulse width modulation, and gets 90% efficiency - 55KW in, 50 KW out! I wrote to Harris about the technique, and the engineer who designed it sent a block diagram and description. The modulator is a big switching tube in series with the final. There are four tubes, including two drivers, a final, and the switch tube. Quite a change from the HUGE modulation choke in the old rig! If anyone cares how they do it, I will dig out the description and post.

73, - Steve - W5EGP

Date: Mon, 26 Apr 1993 14:32:22 GMT

From: dog.ee.lbl.gov!overload.lbl.gov!agate!howland.reston.ans.net!
darwin.sura.net!haven.umd.edu!wam.umd.edu!ham@network.UCSD.EDU

Subject: DAYTON!!!

To: info-hams@ucsd.edu

I have been a ham for 8-1/2 years, and I am 24 years old, and I have never been to Dayton before this year. I have only one thing to say:

YEEEEEEEEEEEEEEEEEEHAAAAAAAAAAAAAAAAAAAAAAAAAAAAAH!!!!!!!!!!!!!!!!!!!!

Whatta blast! Even if most of the HF rigs there were overpriced, I got mine from somebody who, unlike most other people there, wanted to make a quick sale, and was willing to give a good price to do so. The number of people selling Motorolas was kind of overwhelming, and (thankfully) there weren't a million zillion Computer vendors. If I wanted that, I'd go to a computer show or one of the hamfests around DC.

A TRADE SHOW RIVALING FOSE (in DC) ON THE INSIDE! Really EXPENSIVE door prizes. Shoulda heard the guy who won a TS-50S from Kenwood.

You could hear him from OUTSIDE the arena.

I worked W8BI/8, the special events station, from the other end of the parking lot on 20 meter QRP CW, and then went over and met the guy I had spoken to, and then got to be a guest operator!

In our hotel, nearly everybody staying there was a ham. The group I went with bought a lot of 10-24 AmpHour batteries, and we were testing them in our van in the parking lot. No fewer than 10 people stopped by to say "Hi." We met dozens of people with whom we had only spoken to in the past, and generally had a great time.

We are already planning for next year...

--

73,

 \ / Long
Scott Rosenfeld Amateur Radio NF3I Burtonsville, MD | Live

WAC CW/SSB WAS 80% of the way to DXCC -----| Dipoles!

Date: Tue, 27 Apr 1993 11:16:48 GMT
From: anomaly.sbs.com!kd1hz@uunet.uu.net
Subject: How to help an 8 yr old get a license
To: info-hams@ucsd.edu

peterson@phycs1.byu.edu writes:

>I would appreciate any help you may have to offer on this.

If he decides to learn the code, make sure you buy some high-speed code tapes. There is a good set by Jerry-Something-or-Other, who takes you from 0 to 23 WPM. HRO has them.

MD

--

-- Michael P. Deignan / Sex is hereditary. If your
-- Domain: mpd@anomaly.sbs.com / parents never had it, chances
-- AT&TNet: +1 401 273 4669 / are you won't either...
-- Telebit: +1 401 455 0347 /

Date: 26 Apr 93 15:13:41 -0600
From: usc!elroy.jpl.nasa.gov!swrinde!gatech!willis1.cis.uab.edu!nntp.msstate.edu!

nntp.memst.edu!kagoos@network.UCSD.EDU
Subject: Linked/Wide Area Repeaters on I-40
To: info-hams@ucsd.edu

I will be leaving for a week long road trip thursday. I will be leaving Memphis, TN and going on I-40 all the way to LA. Does anybody know of any linked/wide area repeaters enroute. I will have 2m and 440 capabilities.

I know there exists linked systems like the ZIA Connection etc. If anybody has any info I would like to hear it.

Suresh N9GSA

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-----
|  \ /  | /  \  \  | | | | Suresh Kagoo  EE Dept , Memphis State University
|  \ /  | \  \  \  | | | | Engineering 211  | Domain: KAGOOS@MEMSTVX1.MEMST.EDU
|  \ /  | \  \  \  | | | | Memphis, TN 38152| AMPR : n9gsa@gate.n9gsa.ampr.org
|_|\|_| \  \  \  /  \  \  / Ph: (901) 678-3867| AX.25 : N9GSA@W4BS.#WESTN.TN.USA
-----
```

Date: 27 Apr 1993 16:17:07 GMT
From: jgervais@ucsd.edu
Subject: no-code defense
To: info-hams@ucsd.edu

In article <1993Apr26.042844.18653@nntpd2.cxo.dec.com> little@nuts2u.enet.dec.com (nuts2u::little) writes:

>"system@garlic.sbs.com (Anthony S. Pelliccio)" writes:

>

>>I really don't have a big problem with the no-code license, but I do
>>have a problem with no-code licensees who scream for this and that
>>without making the effort to upgrade.

>

>Glad to hear that. I made the effort and I *still* think the code
>requirement is a crock.

>

>>It also depends on what area of the country you're in. I know out here,
>>2m has become the CB of the ham bands. And hey, look at Britain where
>>they won't allow their entry class licensees access to 144-146MHz
>>because of "Congestion and poor operating practices."

>

>Right, and learning the code somehow instills good operating practices. I
>guess those NALs the FCC has been handing out recently and the nonsense on
>14.313 are examples of "good operating practices". Please provide one
>single shred of proof that learning morse code improves operating
>practices.

>

>I suppose the no-code bashing that seems to emanate from your system is
>another example of the "good operating practices" you're hoping to find?
>
>73,
>Todd
>N9MWB

And to add my two bits...

What bothers me in particular is that the original poster felt it necessary to "apologize" for their choice of license. C'mon folks, what have we been doing here? When I first got into ham radio I was told of a "close-knit community, supportive and friendly people." Trying to make other hams feel inferior really doesn't seem to fit that description.

While I realize that the "no-code" bashers are an unfortunately vocal minority, if they have succeeded in putting legitimate hams on the defensive, then perhaps the rest of us haven't been doing our job.

CW HF is all I work (SSB/voice bores me), but if I happened to like only VHF/UHF, who cares if I never want to learn code? Those who do care, shouldn't. Or should at least refrain from attacking other hams simply based on the comprehension of dits and dahs. We've got bigger problems (14.313 MHz comes to mind). Last month I had the unfortunate displeasure of hearing a ham radio shop employee tell a "fresh" tech that "13 wpm is what separates the men from the boys..." Give me a break! No wonder amateur radio almost shrivelled up and died! If I hadn't been late for an appointment, I would've loved spending the next hour hearing more about this fascinating theory.

Bottom line - my apologies to any Techs who've been put on the defensive. The people making the attacks are the same bozos who drive in the fast lane with their left turn signal on.

73 de KD6PRD
Joe Gervais jgervais@ucsd.edu
13 WPM or Bust!

"So... if she... weighs the same as a		Mystery Science Theatre 3000	
duck... she's made of wood."		"It's not just cool, it's the	
"And therefore?"		only thing on TV Saturday	
"...a witch!!!"		afternoons."	

Date: Mon, 26 Apr 93 15:34:46 GMT
From: dog.ee.lbl.gov!overload.lbl.gov!agate!headwall.Stanford.EDU!
nnntp.Stanford.EDU!umunhum!paulf@network.UCSD.EDU
Subject: no-code defense
To: info-hams@ucsd.edu

This thread has pretty much veered in the direction of rec.radio.amateur.policy
and followups should wind up there, not here.

--
-=Paul Flaherty, N9FZX | "Just name a hero, and I'll prove he's a bum."
->paulf@Stanford.EDU | -- Col. Gregory "Pappy" Boyington, USMC (ret)

Date: 26 Apr 93 21:40:04 GMT
From: ogicse!hp-cv!sdd.hp.com!hpscit.sc.hp.com!icon.rose.hp.com!
greg@network.UCSD.EDU
Subject: Paddle key question
To: info-hams@ucsd.edu

jhw@rti.rti.org wrote:

:
: For right handers, pushing the paddle
: to the right with the thumb caused the generation of dots. Pushing
: it to the left with the index finger caused the generation of a
: continuous dash that lasted as long as the paddle was pressed.
: The push-paddle-to-right association with dots was fixed by the
: construction of the bug and could not be changed.

Right, and for us Left handers, you end up learning it backwards, which I
am in the process of doing.

I also play a right-handed guitar upside down, with fingering altered to match.
You adapt...

Greg KD6KGW

Date: 26 Apr 93 15:35:02 GMT
From: uplherc!wpsun4!mb@uunet.uu.net
Subject: R2 DC rcvr kit catalog
To: info-hams@ucsd.edu

Has anyone received a reply from Rick Campbell, KK7B, in response to a request for a catalog or any information regarding his high-performance direct-conversion receiver (QST, Jan. 1993)? I wrote him for info when the article appeared, and then again about 6 weeks ago, enclosing an SASE both times. Nada. Anyone had better luck than me?

Sure looks like a terrific receiver...

Date: 26 Apr 1993 10:21:27 -0400
From: mvb.saic.com!unogate!news.service.uci.edu!usc!howland.reston.ans.net!
noc.near.net!genrad.com!genrad.com!not-for-mail@network.UCSD.EDU
Subject: Reciprical license in ENGLAND
To: info-hams@ucsd.edu

I took my FT757 with me one trip to the UK and declared it to the guy in the Red customs lane, he asked if I was taking it out of the country after my visit and I assured him I was - "have a nice stay" was his response.

The biggest hassle was I couldnt turn it on for the security guys at IAH but they finally let me through. So next time I'll put any equipment in my checked luggage not in my briefcase.

Customs have no interest in whether you have a valid licence but more in the money they can rip off if you import stuff. They probably view complex electronics in the same light as laptop computers and video cameras.

But its always best to check with the customs guys - the Red lane is pretty quick too as few people want to declare stuff and unless the guy in front of you is trying to get his bale of best algerian through as alfalfa samples it should be efficient.

Have a good trip,

73 Trevor G3WQ0 AB5EU still exiled in Texas

Date: 27 Apr 93 18:39:00 GMT
From: news-mail-gateway@ucsd.edu
Subject: Repeater freq.s - VA/NC/SC
To: info-hams@ucsd.edu

I'm planning a vacation trip soon from Sowthwest Va. (Christiansburg) to Myrtle Beach, SC. If anyone can recommend some good/useful 2m repeaters along the way I'd appreciate it; feel free to e-mail replies directly

to me.

Thanks much.

'73...

--gary

.....
Gary F. Kendall KENDALLG@VTVM1.BITNET -or- kendallg@vtvm1.cc.vt.edu
KB4GCF
.....

Date: 26 Apr 93 09:30:38 EDT
From: psinntp!arrl.org@uunet.uu.net
Subject: TOUCH LAMP INTERFERENCE
To: info-hams@ucsd.edu

In rec.radio.amateur.misc, marchbg@feenix.metronet.com (Marc Grant) writes:

>Help! I've got two touch-sensitive desk lamps in my bedroom that
>absolutely wreak havoc on my HF rig! I have to unplug them so that I can
>work! My wife loves the lamps, so I'd like to find a way to eliminate the
>noise - any suggestions??????

Date: Sun, 25 Apr 1993 14:02:18 EST
From: anomaly.sbs.com!n1mpq!news@uunet.uu.net
Subject: What offsets are used for vh
To: info-hams@ucsd.edu

ka1zex@novalink.com (Ron Dupont) writes:

>
> On Sun, 25 Apr 93 16:14:47 GMT, washer@sequent.com writes:
>>
>> Can anyone tell me what offsets are used on public service vhf-hi (154MHz)
>> repeaters? Is it always the same (like 2meter ham is now)?
>>
>> Just in case you're wondering why I want this info, I'd like to play with
>> DF-ing public service vehicles.
>>
>> - jim KG7HH washer@sequent.com
>>
>>
>

> all different offsets, around here they are weird, like some are a whole
> MHZ up or down...

Hmmm... not sure about VHF but I know on UHF public service freqs around
here they use the standard 5MHz offset. Ie. police channel 1
is 460.100 and the input is 465.100.

Tony

```
-----  
-- Anthony S. Pelliccio, kd1nr/ae      // Yes, you read it right, the //  
-- system @ garlic.sbs.com           // man who went from No-Code //  
-----// (Thhhppptt!) to Extra in //  
-- Flame Retardent Sysadmin          // exactly one year! //  
-----  
-- This is a calm .sig! --  
-----
```

Date: 26 Apr 93 21:43:52 GMT
From: ogicse!uwm.edu!linac!att!cbnews!jeffj@network.UCSD.EDU
To: info-hams@ucsd.edu

References <1993Apr24.110011.23106@anomaly.sbs.com>,
<RFM.93Apr24165314@urth.eng.sun.com>,
<930425.134945.2T9.rusnews.w165w@garlic.sbs.com>
Subject : Re: no-code defense

In article <930425.134945.2T9.rusnews.w165w@garlic.sbs.com> system@garlic.sbs.com
(Anthony S. Pelliccio) writes:

```
>> In article <1993Apr24.110011.23106@anomaly.sbs.com> kd1hz@anomaly.sbs.com (Re  
>> v. Michael P. Deignan) writes:  
>> >I am currently a no-code (N7YIR)...  
>> >I do not have a lot of "extra" time to study code.
```

I spent 5 to 10 minutes a night for about 2 to 3 weeks and passed the
5 WPM test that way. Even when I was really tired and short of time I
put SuperMorse on for 1 to 2 minutes to keep the sounds fresh in my
mind. My wife did the same and passed her code test also. Try it!

```
>-----// (Thhhppptt!) to Extra in //  
>-- Flame Retardent Sysadmin          // exactly one year! //  
                                         ^^^^^^^^^^^^^^^^^  
                                         Same here!
```

Jeff Jones

--

Jeff Jones AB6MB | OPPOSE THE NORTH AMERICAN FREE TRADE AGREEMENT!
jeffj@seeker.mystic.com | Canada/USA Free Trade cost Canada 400,000 jobs.
Infolinc BBS 415-778-5929 | Want to guess how many we'll lose to Mexico?

Date: (null)

From: (null)

ARRL RF Touch Lamps Information Package

RF Touch lamps are RF-operated devices that often cause, or are susceptible to, EMI problems. They have a free running oscillator that is very broad and rich in harmonic energy. This oscillator is hooked up to a touch plate that changes the frequency of the oscillator when a hand is placed near the plate. Unfortunately, this plate also acts as an antenna, radiating some of the energy of the oscillator, or picking up nearby radio signals. When the former happens, it can interfere with other services. When the latter happens, the circuitry inside the lamp reacts the same way that it would when the plate is touched -- the lamp changes states from "off" to "on".

Although cases of moderate interference can sometimes be cured by using a "brute-force" type AC-line filter and/or a common-mode choke (see the ARRL Book, Radio Frequency Interference -- How to Find It and Fix It for more information about AC-line filters and common-mode chokes) most cases will require internal modification to the lamp. For a number of different reasons (you may be blamed if anything EVER goes wrong with the lamp or house wiring) you do not want to perform this modification on equipment that is not your own. Remember -- house AC power is dangerous. These modifications must only be performed by qualified service personnel!

Here are some reprints from QST "Hints and Kinks":

RFI and Touch-Controlled Lamps. I have found a simple cure for those touch-controlled lamps that turn themselves on and off during nearby radio transmissions. In my case, 40-meter operation gave the most trouble, with 75-meter operation a close second. Higher frequencies presented no problem. (I use a ground-mounted vertical antenna for 80, 40 and 15 meters, and the lamp is approximately 150 feet from the antenna. An AC-line filter at the lamp did not eliminate the problem.)

A 1-kohm resistor (in series with the signal input lead to the

encapsulated circuit that operates the lamp) cured the problem for me. I suppose the required resistor value would vary with the RF-field intensity and frequency. -- John M. Adams, W70TC, Sun City, CA

More on RFI to Touch-Controlled Lamps. I had the same problems as W70TC with a touch-controlled lamp switched on and off by my transmissions (100 W to a roof-mounted vertical, with two radials per band). The problem occurred during operation on the 80-through 15-m bands, but 10-m operation had no effect. A 1-kohm resistor was not a complete cure in my case.

A 3.3-kohm resistor in series with the signal input on the lamp helped on all bands except 80 m (an additional 1.8kohm prevented the lamp from functioning). When the resistor was replaced with an RF choke (100 uH, 139 mA), the problem abated on all bands except for 80 m. On 80 m, the interfering signal was considerably attenuated by the choke, but the lamp still switched. The choke alone may be enough to clear up the problem in some cases.

The final answer turned out to be both the RF choke and a 1.8kohm resistor in series with the signal-input lead to the touch-control circuit. -- Colin Hall, G4JPZ/W6, Marina Del Rey, CA

Touch-Lamp Transceiver. When my wife told me she had bought a three-way lamp that switched on and off at the touch of any of its metallic parts, i did not realize she had purchased a transeiver. I found that my transmitted signal would cause the lamp to operate exactly as if I had touched its metal parts. Later I discovered a raspy, S8 signal at 1875 kHz -- it was coming from the lamp, which was located three rooms away on a different AC circuit. The lamp signal is present from 40 meters down. At frequencies from 20 meters up, my operation is undisturbed.

A box inside the lam contains a circuit board through which AC line voltage is routed and which has a wire connected to the metal base of the lamp. WHen the lamp is plugged in, the lam signal is present at all times, regardless of whether the lamp is on or off. In my attempts to eliminate the interference, I tried a commercial AC filter, coiling the lamp cord on some ferrite material and other such approaches with out success.

To make sure the lamp my wife had was not defective, I borrowed a similar lamp from a neighbor to try it. I found it to perform in exactly the same manner except that the frequency of oscillation was somewhat different. There is no manufacturer or distributor name on the lamp or packing container. The lamp was made in Taiwan.

I am writing so that others who may be experiencing similar difficulties may have some idea of the probable source of interference. After I described what I discovered to a ham friend, he realized that such a unit had been causing interference to his station for more than a month. -- Cal Enix, W8EN, 209 S Kalamazoo St, White Pigeon, MI 49099

If these cures don't work, it may be possible to shield the electronic switch module, but this must be done safely! You may also want to contact the manufacturer and send a report of your problem to ARRL Headquarters RFI Desk, 225 Main St. Newington CT 06111.

If you come up with a better solution for this problem, please write to the RFI Desk with the solution. It sounds like it would be a good candidate for Hints and Kinks!

"73" from ARRL HQ

Ed Hare, KA1CV
American Radio Relay League
225 Main St.
Newington, CT 06111
(203) 666-1541 - voice
ARRL Laboratory Supervisor
RFI, xmtr and rcvr testing

ehare@arrl.org

You will never put the puzzle together
if you keep putting all the pieces
back in the box.

End of Info-Hams Digest V93 #504
